

CLAIMS

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1. A ceramic product having a treated surface formed with a layer composed of a stain resistant agent, said agent including  
5 a silicon-containing functional group combining with a hydroxyl group present on said treated surface by dehydration or dehydrogenation.

2. The ceramic product according to claim 1, wherein the  
10 silicon-containing functional group does not combine with another silicon-containing functional group.

3. The ceramic product according to claim 1 or 2, wherein the stain resistant agent contains a terminal carbon fluoride  
15 group combining with the silicon-containing functional group.

4. The ceramic product according to claim 3, wherein the carbon fluoride group is  $-C_nF_{2n+1}$  where n is a natural number in a range of  $1 \leq n \leq 12$ .  
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5. The ceramic product according to claim 1 or 2, wherein the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group and a terminal alkyl group combining with said silicon-containing  
25 functional group, and said alkyl group has a larger quantity than said carbon fluoride group.

6. The ceramic product according to claim 1 or 2, wherein

the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group and a terminal alkyl group combining with said silicon-containing functional group, and said carbon fluoride group has a larger  
5 quantity than said alkyl group.

7. The ceramic product according to claim 5, wherein the silicon-containing functional group and the alkyl group are combined with each other by dimethyl siloxane.  
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8. The ceramic product according to claim 6, wherein the silicon-containing functional group and the alkyl group are combined with each other by dimethyl siloxane.

15 9. The ceramic product according to claim 7, wherein the stain resistant agent is a mixture of a first agent and a second agent, said first agent being a co-hydrolysate of an organic silicon compound containing a perphloroalkyl group and a methylpolysiloxane compound containing a hydrolytic group in a  
20 hydrophilic solvent, said second agent being a mixture of organopolysiloxane and a strong acid.

10. The ceramic product according to claim 9, wherein the dimethyl siloxane contains a straight chain combination of the  
25 silicon-containing functional group and the alkyl group.

11. The ceramic product according to claim 1, wherein the treated surface is repeatedly wetted and dried.

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12. A method of stain resistant treatment applied to a ceramic product used with water and having a treated surface on which a layer comprising a stain resistant agent is formed so that said stain resistant treatment is applied to the ceramic product, said stain resistant agent including a silicon-containing functional group combining with a hydroxyl group present on the treated surface by dehydration or dehydrogenation.

13. The method according to claim 12, wherein the silicon-containing functional group does not combine with another silicon-containing functional group.

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14. The method according to claim 12 or 13, wherein the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group.

15. The method according to claim 14, wherein the carbon fluoride group is  $-C_nF_{2n+1}$  where  $n$  is a natural number in a range of  $1 \leq n \leq 12$ .

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16. The method according to claim 12 or 13, wherein the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group and a terminal alkyl group combining with said silicon-containing functional group, and said alkyl group has a larger quantity than said carbon fluoride group.

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17. The method according to claim 12 or 13, wherein the stain  
resistant agent contains a terminal carbon fluoride group  
combining with the silicon-containing functional group and a  
terminal alkyl group combining with said silicon-containing  
5 functional group, and said carbon fluoride group has a larger  
quantity than said alkyl group.

18. The method according to claim 16, wherein the  
silicon-containing functional group and the alkyl group are  
10 combined with each other by dimethyl siloxane.

19. The method according to claim 17, wherein the  
silicon-containing functional group and the alkyl group are  
combined with each other by dimethyl siloxane.

15 *Sub A8* 20. The method according to claim 18, wherein the stain  
resistant agent is a mixture of a first agent and a second agent,  
said first agent being a co-hydrolysate of an organic silicon  
compound containing a perphloroalkyl group and a  
20 methylpolysiloxane compound containing a hydrolytic group in a  
hydrophilic solvent, said second agent being a mixture of  
organopolysiloxane and a strong acid.

21. The method according to claim 20, wherein the dimethyl  
25 siloxane contains a straight chain combination of the  
silicon-containing functional group and the alkyl group.

*Sub A9* 22. The method according to claim 12, wherein the treated

surface has already been used.

23. The method according to claim 22, comprising a pretreatment step of reproducing a hydroxyl group on the treated surface.

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24. The method according to claim 12, wherein the treated surface is repeatedly wetted and dried.

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